



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,212	03/27/2006	Masayuki Takeda	8013-1265	5185
<small>465</small> YOUNG & THOMPSON 209 Madison Street Suite 500 ALEXANDRIA, VA 22314			<small>7590</small> EXAMINER THOMAS, ERIC W	
			ART UNIT 2831	PAPER NUMBER
			MAIL DATE 05/28/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/534,212

Applicant(s)

TAKEDA ET AL.

Examiner

Eric Thomas

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/ISD)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 3/09, 5/09

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 01-268110 ('110) in view of JP 10-116629 ('629) and JP 2000-173876 ('876).

'110 discloses an aluminum electrolytic capacitor comprising a wound capacitor element fabricated by winding an anode foil [3], a cathode foil [4] and a separator (5) and impregnating the capacitor element with an electrolyte solution, an outer case [1] for housing the capacitor element, and wherein a separator is a heat resistant synthetic resin (rayon - abstract).

'110 discloses the claimed invention except for the electrolyte solution containing aluminum tetrafluoride salt and the sealing member comprises a partial cross-linking peroxide butyl rubber that is added as a cross-linking agent to a copolymer of isobutylene, isoprene, and divinylbenzene.

'629 teaches an electrolyte solution for use in an aluminum electrolytic condenser [0001] comprising an aluminum tetrafluoride salt (preferable - [0020]).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the electrolyte of '629 in the aluminum electrolytic capacitor of '864, since such a modification would form a capacitor having a stable electrolyte having good conductivity.

'876 discloses an electrolytic capacitor sealer material comprising of a copolymer of isobutylene, isoprene, and divinylbenzene, and dicumyl peroxide (abstract).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to seal the capacitor of '864 using the sealant material of '876, since such a modification would form a capacitor having excellent low temperature characteristics.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000-173864 ('864) in view of JP 10-116629 ('629) and JP 2000-173876 ('876).

'864 discloses an aluminum electrolytic capacitor comprising a wound capacitor element fabricated by winding an anode foil [0002], a cathode foil [0002] and a separator and impregnating the capacitor element with an electrolyte solution, an outer

case [0002] for housing the capacitor element, and wherein a separator is a mixed paper containing glass fiber.

'864 discloses the claimed invention except for the electrolyte solution containing aluminum tetrafluoride salt and the sealing member comprises a partial cross-linking peroxide butyl rubber that is added as a cross-linking agent to a copolymer of isobutylene, isoprene, and divinylbenzene.

'629 teaches an electrolyte solution for use in an aluminum electrolytic condenser [0001] comprising an aluminum tetrafluoride salt (preferable - [0020]).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the electrolyte of '629 in the aluminum electrolytic capacitor of '864, since such a modification would form a capacitor having a stable electrolyte with good conductivity.

'876 discloses an electrolytic capacitor sealer material comprising of a copolymer of isobutylene, isoprene, and divinylbenzene, and dicumyl peroxide (abstract).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to seal the capacitor of '864 using the sealant material of '876, since such a modification would form a capacitor having excellent low temperature characteristics.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over 2000-173864 ('864), JP 10-116629 ('629), and JP 2000-173876 ('876) as applied to claim 2 above, and further in view of Arora et al. (RE 31,743).

'864 discloses the claimed invention except for the anode or cathode foil being subjected to a phosphate treatment.

Arora et al. teach that treating an aluminum foil with a phosphate treatment produces a uniform etched structure.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to treat the anode and cathode foils with a phosphate etch treatment, since such a modification would uniformly etch the anode and cathode foils.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 01-268110 ('110) , JP 10-116629 ('629) and JP 2000-173876 ('876) as applied to claim 1 above, and further in view of Arora et al. (RE 31,743).

'110 discloses the claimed invention except for the anode or cathode foil being subjected to a phosphate treatment.

Arora et al. teach that treating an aluminum foil with a phosphate treatment produces a uniform etched structure.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to treat the anode and cathode foils with a phosphate etch treatment, since such a modification would uniformly etch the anode and cathode foils.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140

F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thornton*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 20 of U.S. Patent No. 7,072,173 in view of JP 2000-173876 ('876) and JP 01-268110 ('110).

'173 discloses in claim 20, an electrolytic capacitor electrolyte wherein the electrolyte solution contains aluminum tetrafluoride salt.

'173 discloses the claimed invention except for the electrolytic capacitor comprises anode and cathode foils, a separator formed of a heat resistant, and an outer case housing the capacitor element, wherein the separator is formed from a heat resistant synthetic resin and a sealing member that seals the outer case which is formed of a partial cross-linking peroxide that is added as cross-linking agent to a butyl rubber polymer comprising a copolymer of isobutylene, isoprene, and divinylbenzene.

'876 teaches that a typical electrolytic capacitor comprises an electrolytic capacitor element comprising anode and cathode foils, a separator; wherein an outer case houses the capacitor element; wherein a sealing member seals the outer case which is formed of a partial cross-linking peroxide that is added as a cross-linking agent

to a butyl rubber polymer comprising a copolymer of isobutylene, isoprene, and divinylbenzene.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the electrolyte in an electrolytic capacitor comprising anode and cathode foils, and a separator; wherein the capacitor element is formed within an outer case, and a sealing member that seals the outer casing; wherein the sealing member is formed of a partial cross-linking peroxide that is added as a cross-linking agent to a butyl rubber polymer comprising a copolymer of isobutylene, isoprene, and divinylbenzene, since such a modification would form an electrolytic capacitor having an electrolyte with good electrochemical properties.

'110 discloses an aluminum electrolytic capacitor comprising a wound capacitor element fabricated by winding an anode foil [3], a cathode foil [4] and a separator (5) and impregnating the capacitor element with an electrolyte solution, an outer case [1] for housing the capacitor element, and wherein a separator is a heat resistant synthetic resin (rayon - abstract).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the separator of '173 using the heat resistant synthetic resin of '110, since such a modification would form an aluminum electrolytic capacitor having a separator with high heat resistance.

9. Claim 2 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 20 of U.S. Patent No. 7,072,173 in view of JP 2000-173864 ('864) and JP 2000-173876 ('876).

'173 discloses an electrolytic capacitor electrolyte wherein the electrolyte solution contains aluminum tetrafluoride salt.

'173 discloses the claimed invention except for the electrolytic capacitor comprises anode and cathode foils, and a separator that is formed from a mixed paper containing glass fiber; an outer case and a sealing member that seals the outer case which is formed of a partial cross-linking peroxide that is added as a cross-linking agent to a butyl rubber polymer comprising a copolymer of isobutylene, isoprene, and divinylbenzene.

'876 teaches that a typical electrolytic capacitor comprises an electrolytic capacitor element comprising anode and cathode foils, a separator; wherein an outer case houses the capacitor element, wherein a sealing member seals the outer case which is formed of a partial cross-linking peroxide that is added as cross-linking agent to a butyl rubber polymer comprising a copolymer of isobutylene, isoprene, and divinylbenzene.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the electrolyte in an electrolytic capacitor comprising anode and cathode foils, a separator, wherein the capacitor element is formed within an outer case, and a sealing member that seals the outer casing, wherein the sealing member is formed of a partial cross-linking peroxide that is added as cross-linking agent to a butyl

rubber polymer comprising a copolymer of isobutylene, isoprene, and divinylbenzene, since such a modification would form an electrolytic capacitor having an electrolyte with good electrochemical properties.

'864 discloses an electrolytic capacitor comprising a mixed paper containing glass fiber separator.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the separator of '173 from the material of '864, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

10. Claim 3 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 20 of U.S. Patent No. 7,072,173 in view of JP 2000-173864 ('864), JP 2000-173876 ('876), and Arora et al. (RE 31,743).

'173 discloses the claimed invention except for the anode or cathode foil being subjected to a phosphate treatment.

Arora et al. teach that treating an aluminum foil with a phosphate treatment produces a uniform etched structure.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to treat the anode and cathode foils with a phosphate etch treatment, since such a modification would uniformly etch the anode and cathode foils.

11. Claim 5 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 20 of U.S. Patent No. 7,072,173 in view of JP 2000-173876 ('876), JP 01-268110 ('110) and Arora et al. (RE 31,743).

'173 discloses the claimed invention except for the anode or cathode foil being subjected to a phosphate treatment.

Arora et al. teach that treating an aluminum foil with a phosphate treatment produces a uniform etched structure.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to treat the anode and cathode foils with a phosphate etch treatment, since such a modification would uniformly etch the anode and cathode foils.

Response to Arguments

12. Applicant's arguments with respect to claims 1-3, 5 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Thomas whose telephone number is 571-272-1985. The examiner can normally be reached on Monday - Friday 5:30 AM - 2:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric Thomas/
Primary Examiner, Art Unit 2831